

### **Amendments to the Claims:**

Please enter the following claim amendments.

### **Listing of Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended). An expandable implantable valve prosthesis comprising:

a support frame supporting one or more leaflets, each leaflet comprising a biomaterial, the support frame and the one or more leaflets together function as a valve to restrict blood flow in a first direction when implanted in a vascular vessel;

wherein the biomaterial is folded over the support frame and attached to itself to form a such that the wall-engaging outer edge of each of the one or more leaflets and an overhang portion, the wall-engaging outer edge of each of the one or more leaflets comprising ~~comprises~~ a folded edge of the biomaterial carried by at least a portion of the support frame thereinside; and

wherein, each of the one or more leaflets extend inward from the wall-engaging outer edge to form the valve.

2. (Withdrawn) The implantable valve of claim 1, wherein a cross-linking agent provides the attachment of the biomaterial to itself.
3. (Withdrawn). The implantable valve of claim 1, wherein an adhesive provides the attachment of the biomaterial to itself.

4. (Cancelled).

5. (Cancelled)

6. (Cancelled)

7. (Currently Amended) An implantable valve prosthesis, comprising:

a support frame supporting one or more leaflets, each comprising a biomaterial, the one or more leaflets including a body, an inner edge, and an outer edge;

wherein the support frame and the one or more leaflets together function as a valve to restrict blood flow in a first direction when implanted in the a vascular vessel;

wherein the outer edge of the biomaterial comprising the one or more leaflets is folded over the support frame with the outer edge or portion adjacent thereto being attached to the leaflet body by heat welding, thereby securing the one or more leaflets to the support frame and forming an overhang portion of the one or more leaflets; and

wherein the folded outer edge of the one or more leaflets resiliently engages the a wall of the vascular vessel when implanted therein and the overhang portion forms a pocket adapted to capture retrograde fluid flow.

8. (Cancelled).

9. (Cancelled).

10. (Cancelled).

11.(Withdrawn) An implantable vascular valve, comprising:

a support frame;

one or more leaflets comprised of biomaterial attached to the support frame and configured to function as a valve; and

wherein the biomaterial is wrapped around the support frame and affixed to itself using an adhesive, thereby securing the one or more leaflets to the support frame.

12.(Cancelled).

13.(Cancelled).

14.(Currently Amended) An expandable implantable valve prosthesis, comprising:

a plurality of leaflets of a biomaterial that include a body portion and a an outer edge configured to engage the walls a wall of a vessel, the wall-engaging outer edge further comprising a folded portion of the biomaterial extending along the wall-engaging outer edge and an overhang portion, the folded portion being formed by the attachment of the biomaterial to itself by a series of heat welds positioned therealong, and the overhang portion being formed as a pocket adapted to capture retrograde fluid flow.

15.(Currently Amended) The valve prosthesis of claim 14, wherein the wall-engaging outer edge further includes a support frame enclosed by the folded portion of the biomaterial, wherein the support frame resiliently urges the outer edge against the walls wall of the vessel.

16. (Previously Presented) The valve prosthesis of claim 14, wherein the biomaterial comprises a remodelable material.

17. (Currently Amended) The valve prosthesis of claim 44 16, wherein the remodelable material comprises an submucosa.

18. (Currently Amended) A method of manufacturing an implantable valve prosthesis, comprising the steps of:

providing a flexible biomaterial;

providing a support frame comprising one or more struts configured to extend along and resiliently engage ~~the walls~~ a wall of ~~the~~ a vessel and carry a wall-engaging outer edge of one or more leaflets when the valve prosthesis is implanted therein;

placing the flexible biomaterial in a hydrated condition against the support frame such that an overhang portion thereof extends beyond the one or more struts;

folding the overhang portion of the flexible biomaterial over the one or more struts, generally enclosing the one or more struts within the folded edge overhang portion; and

welding the folded overhang portion back to the flexible biomaterial to form the one or more leaflets and to secure each to the one or more struts enclosed therein such that the folded edge overhang portion comprises the wall-engaging outer edge of the one or more leaflets and forms a pocket adapted to capture retrograde fluid flow.

19. (Currently Amended) The method of claim 18, wherein the folded overhang portion is welded using heat.

20. (Currently Amended) The method of claims 18, wherein the folded overhang portion is welded using pressure.
21. (Currently Amended) The valve prosthesis of claim 1x, wherein the overhang portion further includes a skirt portion.
22. (Currently Amended) The valve prosthesis of claim 1, wherein the biomaterial is attached to itself by a fixation comprising comprises a heat weld.
23. (Currently Amended) The valve prosthesis of claim 1, wherein the biomaterial is attached to itself by a fixation comprising comprises a pressure weld.
24. (Previously Presented) The valve prosthesis of claim 1, wherein the biomaterial comprises a remodelable material.
25. (Previously Presented) The valve prosthesis of claim 24, wherein the remodelable material comprises submucosa.

Please add the following new claims:

26. (New) The valve prosthesis of claim 1, wherein the overhang portion forms a pocket attached to an outside edge of the one or more valve leaflets, the pocket being adapted to capture retrograde fluid flow.
27. (New) The valve prosthesis of claim 1, wherein the biomaterial is a tissue comprising elastin or an elastin like polypeptide.
28. (New) The valve prosthesis of claim 7, wherein the body of the one or more leaflets traverses the support frame from the outer edge to

the inner edge, the inner edge defining an opening to restrict blood flow in the first direction when implanted in the vascular vessel.